

INCH-POUND

A-A-55294A

August 21, 1997

SUPERSEDING

A-A-55294

April 21, 1994

COMMERCIAL ITEM DESCRIPTION

CAP, HOT WEATHER

The General Services Administration has authorized the use of this commercial item description for all Federal agencies.

1. **SCOPE.** This commercial item description covers the requirements for a visor style cap that is intended for wear in hot weather environments by military personnel of the Department of the Army.

2. **CLASSIFICATION.** The cap shall be one type in the following sizes:

Schedule of sizes

6-3/8	7-1/8	7-7/8
6-1/2	7-1/4	8
6-5/8	7-3/8	8-1/8
6-3/4	7-1/2	8-1/4
6-7/8	7-5/8	8-3/8
7	7-3/4	8-1/2

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Defense Personnel Support Center, Clothing and Textiles Directorate, Attn: DPSC-FNS, 2800 South 20th Street, Philadelphia, PA 19145-5099.

AMSC N/A

FSC 8415

DISTRIBUTION STATEMENT A. *Approved for public release; distribution is unlimited.*

3. SALIENT CHARACTERISTICS

3.1 Description. The cap shall be a visor style, having a circular top crown, and a one piece, self-lined side crown with a center back seam. The outside crown band shall be topstitched around the bottom of the side crown. The crown seam shall be reinforced with a bias cut strip of self fabric between inner and outer plies. The cap shall have six vents which are made by metal eyelets uniformly positioned around the sides and back of the cap. The visor shall be quilted with six rows of evenly spaced parallel lockstitching, and the inner edge of the visor interlining shall abut the bottom of the topstitched side crown band. The under visor cover shall overlap the top of the visor 1/4 inch and stitch through plies and interlining 3/16 to 1/4 inch from the outer edge. The cap shall be topstitched around the top of the side crown (without catching inner lining), the top and bottom of the under visor cover, and along the center back seam.

3.1.1 Seams and stitching. All seams and stitching shall be 10 to 14 stitches per inch except for the stitching through the visor and the stitches for seaming the visor cover together along the inner edge of the visor interlining (not through the interlining). These shall be 6 to 8 stitches per inch. Top stitching shall be performed using a 300 series lockstitch. The gage of stitching for all topstitching shall be 1/8 to 3/16 inch.

3.2 Material.

3.2.1 Basic material. The cloth shall be woodland camouflage printed, water-repellent-treated ripstop poplin. The ribs shall be formed by having every twenty-fourth warp end contain two ends weaving as one and every thirteenth filling contain two picks weaving as one. The cloth shall be a blend of 50 ± 5 percent nylon, 1 percent static dissipative fiber, with the remaining percentage combed cotton. The warp yarn shall be 2-ply and the filling yarn shall be 2-ply or singles. As an alternate to the basic material, the cloth for the side crown lining and the crown seam reinforcement strip shall be ground shade cloth, printed seconds cloth, or dyed seconds cloth. The color shall be a Woodland Camouflage Pattern (Light Green 354, Dark Green 355, Brown 356, and Black 357). All colors of the finished cloth shall match the standard sample when viewed under filtered tungsten lamps that approximate artificial daylight and that have a correlated temperature of 7500 ± 200 K, with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2300 ± 200 K. The cap shall conform to the requirements specified in Table I.

TABLE I. Basic material physical requirements

Characteristic	Requirement	Test method
Weave	Plain	Visual
Weight, oz./sq.yd.	6.0 - 7.0	ASTM-D-3776, Option C
Yarns per inch (min.)		
Warp	104	ASTM-D-3775
Filling	52	ASTM-D-3775

TABLE I. Basic material physical requirements - continued

Characteristic	Requirement	Test method
Breaking strength, (lbs., min.) Warp Filling	200 90	ASTM-D-5034, Option G-T or G-E ASTM-D-5034, Option G-T or G-E
Tearing strength, (lbs., min.) Warp Filling	7.0 5.0	ASTM-D-1424 ASTM-D-1424
Air permeability, (ft. ³ /min./ft. ²), max.	10.0	ASTM-D-737
Colorfastness to: Laundering Perspiration Crocking Light	“good” <u>1/</u> “good” <u>1/</u> “good” <u>1/</u> “good” <u>1/</u>	AATCC 61, 3A AATCC 15 AATCC 8 AATCC 16, Option A
Spectral reflectance, (nanometers)	600 - 860	3.2.1.2
Non-fibrous material, (% max.)	2.0	ASTM -D-629, Section 9
pH	5.0 - 8.5	ASTM-D-2165
Dimensional stability (percentage, max.) Warp Filling	3.5 3.5	AATCC 96, Option 1C & D AATCC 96, Option 1C & D
Seam efficiency, (% max.)	80	ASTM-D-1683
Water repellency Dynamic absorption Initial After 15 launderings Spray rating (3 determinations)	Lot average <u>2/</u> 25 25 90, 90, 80	AATCC 70 AATCC 118

1/ or equal to standard sample

2/ No individual specimen shall exceed 30.

3.2.1.1 Electrostatic decay. The finished cloth, when charged toward +5000 volts and -5000 volts, reads a minimum level of +4000 and -4000 volts, respectively, and shall dissipate 90 percent of the charge in one-half second or less after five launderings on the face side. The test shall be conducted in accordance with AATCC 96 and ASTM-D-4258.

3.2.1.2 Spectral reflectance. The spectral reflectance values for each color in the Woodland Camouflage printed cloth shall conform to the requirements specified in Table II.

TABLE II. Spectral reflectance requirements

Reflectance values (percent)						
Wavelength Nanometer (nm.)	Light Green 354		Dark Green 355 and Brown 356		Black 357	
	Min	Max.	Min.	Max.	Min.	Max.
600	8	18	3	9	--	10
620	8	18	3	9	--	10
660	8	18	3	12	--	10
680	10	22	3	14	--	10
700	18	33	5	18	--	10
720	22	45	7	20	--	10
740	30	55	12	28	--	10
760	35	65	18	36	--	10
780	40	75	26	44	--	10
800	45	80	34	52	--	10
820	50	86	42	60	--	10
840	55	88	50	68	--	10
860	60	90	56	74	--	10

3.2.2 Visor interlining. The visor interlining shall be a plastic high density polyethylene material weighing 12.0 to 14.5 grams per visor, having a thickness of 0.083 to 0.089 inch, and 40 to 60 percent stiffness when tested in accordance with ASTM-D-747.

3.2.3 Cap interlining. The inside of the center front of the cap shall be stabilized with a square cut piece of natural white, plain weave, multifilament polyester or nonwoven interlining made from 100 percent polyester continuous filament fibers that are randomly arranged and bonded at the filament junctions or from a blend of staple nylon and staple rayon fibers, or a blend of polyester and nylon or rayon staple bound with a suitable acrylic binder. The contractor shall submit a certificate of compliance to ensure that the fiber content requirement has been met. The stabilizer cloth shall be cut 3 inches wide, and the length shall extend from the top crown joining seam to the visor joining seam. The interlining shall conform to the requirements specified in Table III.

TABLE III. Interlining requirements

Characteristic	Requirement		Test method
Weight(oz./sq. yd., min.)			
Non-woven	3.4		ASTM-D-1117, Section 17
Woven	3.3		ASTM-D-3776
Breaking strength (lbs., min.)	Warp	Filling	
Non-woven	100	80	ASTM-D-1117, Section 7
Woven	190	150	ASTM-D-1682, Section 16
Warp stiffness (in./lbs.)	0.0030(min.)	0.0120(max.)	ASTM-D-747

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3.2.4 Thread. The thread shall be water repellent treated with a durable water repellent treatment and be a 2-ply, cotton-covered polyester, 35 and 40 Tex for the cap and 65 Tex for quilting the visor. The thread shall show "good" colorfastness to laundering and light when tested in accordance to AATCC 61, Test 3A and AATCC 16, Option A, respectively.

3.2.5 Eyelets. Eyelets shall be made from brass with enamel finish and the color shall be Green 107. The eyelets shall be the rolled flange type. The size of the eyelet shall be as diagrammed in Figure 1.

3.3 Labels. The labels shall be nonwoven, Medium Green, Cable No. 70034, 70130, or 70131 with black legible marking. It shall show colorfastness to laundering, with a minimum rating of "4" when tested in accordance with AATCC 61, Test No IVA. The label shall be centered inside the back of the cap, sewn to the lining on all four sides, and shall not interfere with the vents. The label shall contain the information on the following format:

CAP, HOT WEATHER	S
Contract Number	I
National Stock Number	Z
Fur, Wool, or Fiber Products Act Information as applicable	E
Contractor Name	

1. If cap is worn under helmet, helmet head band may require readjustment for proper fit and comfort.
2. Machine Wash. Use permanent press cycle. Wash in warm water with mild detergent.
3. Hand Wash. Hand wash in warm water using mild detergent. DO NOT WRING OR TWIST. Rinse in clean warm water.
4. DO NOT USE CHLORINE BLEACH OR STARCH.
5. Dry at low heat (Do not exceed 130°F).

DO NOT REMOVE THIS LABEL

3.3.1 Label/tag. Each item shall be individually bar-coded with a paper tag for personal clothing items. The paper tag shall be standard bleached sulfate having a basis weight of 100 pounds. The paper used for the tags shall have a smooth finish to accept thermal transfer and direct printing. The tags shall have a hole and shall be attached to each item by a fastener, clearly legible and readable by a scanner. The bar coding element shall be a 13 digit national stock number (NSN). The bar code type shall be a medium to high code density and shall be located so that it is completely visible on the item when it is folded and/or packaged as specified and so that it causes no damage to the item.

3.4 Sizes and measurements. The finished caps shall conform to the measurements specified in Tables IV and V.

TABLE IV. Cap sizes (inches)

Size	Inside cap circumference ($\pm 1/4$ inch tolerance)
6-3/8	20-1/8
6-1/2	20-1/2
6-5/8	20-7/8
6-3/4	21-1/4
6-7/8	21-5/8
7	22
7-1/8	22-3/8
7-1/4	22-3/4
7-3/8	23-1/8
7-1/2	23-1/2
7-5/8	23-7/8
7-3/4	24-1/4
7-7/8	24-3/8
8	25
8-1/8	25-3/8
8-1/4	25-3/4
8-3/8	26-1/8
8-1/2	26-1/2

TABLE V. Cap measurements (inches)

	A	B	C	D	E
	3-5/8	1-1/8	3-1/2	2-5/8	2-1/8
Tolerance	$\pm 1/4$	$\pm 1/8$	$\pm 1/4$	$\pm 1/4$	$\pm 1/8$

NOTE: Reference Figure 2 for A, B, C, D, and E measurements.

3.5 Patterns. A set of standard patterns to be used to cut working patterns will be furnished by the Government. The working patterns shall be identical to the Government patterns. Neither the Government patterns nor the working patterns shall be altered in any way, except that additional notches for use during construction are allowed on the working patterns. Also, minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements. The standard patterns provide a seam allowance of 3/8 inch for the joining seams, and 1/4 inch for all other seams. The out band pattern part may be cut on warp or filling.

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. QUALITY ASSURANCE PROVISIONS

5.1 Product conformance. The products offered shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be a similar product that is offered for sale in the commercial market. The Government reserves the right to require proof of such conformance.

5.2 Market acceptance criteria. The item offered, or a generic equivalent, must have been sold to the commercial market or the Government.

5.3 Visual examination. Each cap shall be examined for the defects listed below.

5.3.1 Defects. Any hole, cut, or tear; any visible mend; thread ends not removed; component part omitted, misplaced, or not as required; component part puckered, wrinkled, or pleated; fullness affecting appearance; misshaped or distorted; part of material caught in unrelated operation or stitching; not neatly seamed; back seam off center; skipped stitches or runoff stitches; ends of stitching not secured; loose or tight tension; thread breaks; visor off center or construction not formed evenly; visor interlining caught in visor to cap joining seam; vents located more than 1-1/4 inches below side crown lining and outer fabric not aligned when vents are applied; top ends of side crown band not evenly matched in back closing seam; label missing, incorrect, or illegible; any dimensional measurement of item not as specified; bar code omitted or not readable by scanner; human-readable interpretation (HRI) omitted or illegible; bar code not visible on folded, packaged item; bar code causes damage to the item; any items not packaged in accordance with the contract or purchase order.

5.4 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order.

6. PACKAGING

6.1 Preservation, packing, and marking. The preservation, packing, and marking shall be as specified in the contract or purchase order.

7. NOTES

7.1 Source of Government documents. Copies of military and Federal documents are available from:

Standardization Documents Order Desk
Bldg. 4D
700 Robbins Avenue
Philadelphia, PA 19111-5094

7.2 Source of non-Government documents

ASTM Test Methods

(Applications for copies should be addressed to American Society For Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

AATCC Test Methods

(Applications for copies should be addressed to American Association of Textile Chemists and Colorists (AATCC), P.O. Box 12215, Triangle Park, NC 27709-2215.)

MILITARY INTERESTS:

Custodian:

Army - GL

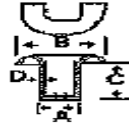
CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

DLA - CT

Project 8415-0102

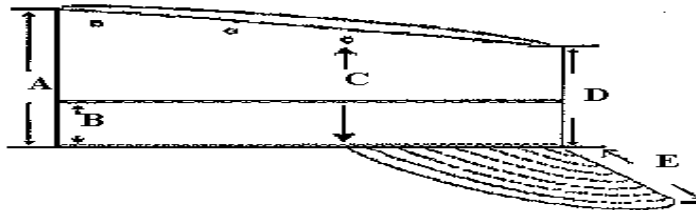


METAL EYELET

A	B	C	D
Plus or minus .004 0.185 With 6 to 8 equal scores on shank end	Plus or minus .007 0.313	Plus or minus .007 0.145	Plus or minus .0015 0.008 Metal thickness before fabrication of eyelet

FIGURE 1

Cap, Hot Weather



Cap Measurements (inches)

	A	B	C	D	E
Tolerance	$3\text{--}5/8$ $\pm 1/4$	$1\text{--}1/8$ $\pm 1/8$	$3\text{--}1/2$ $\pm 1/4$	$2\text{--}5/8$ $\pm 1/4$	$2\text{--}1/8$ $\pm 1/8$

FIGURE 2
CAP, HOT WEATHER